0056577

Meeting Minute Approval Sheet

222-S Project Managers Meeting & Misc. Lab Issues (TSD: TS-2-1)

2704HV/Room G-229
January 31, 2002 LEB 3/7/02
9:30 – 10:00 p.m.

DOE: Geneva Ellis-Balone
Geneva Ellis-Balone Date

ECOLOGY: FJ
Fred Jamison 02-28-02 Date

MEETING MINUTES

222-S Project Manager's Meeting and Miscellaneous Lab Issues (TSD:TS-2-1)
1/31/2002

Meeting Attendees:

Tracy Gao, Ecology
Fred Jamison, Ecology
Jerry Drews, Ecology
Lucinda Borneman, FH
Jay Warwick, FH
Scot Fitzgerald, FH
Jennifer Nuzum, FH
Geneva Ellis-Balone, RL

Introduction:

Mr. Fred Jamison called the meeting to order at 9:30 a.m.

Approval of Previous Meeting Minutes:

Ecology approved the November 28, 2001 meeting minutes.

Status of Action Items:

All Action Items are "Closed".

222-S Laboratory TSD Issues

Fluor Hanford (FH) requested a discussion of the 222-S Waste Analysis Plan provisions regarding the prohibition of transferring waste with the designation "WT02 for rat inhalation only" to the 219-S Tank System. A few examples were shared that illustrates the impacts of the provision, which are attached.

222-S Laboratory Operations:

Lucinda Borneman, FH presented the 222-S Operations report, which is attached. Ecology requested a copy of the ICAD Audit report, when it is issued.

WSCF Laboratory Operations:

Scot Fitzgerald, FH presented the WSCF monthly operations and analytical report. The combined report is attached.

Miscellaneous Issues

FH requested that WSCF attend these meetings on an "as needed" basis. WSCF has not had significant issues to discuss in several months. Ecology will discuss the proposal and respond by next meeting. Ecology also stated that even if WSCF does not attend the meeting that they continue to supply their combined operations and analytical report.

Review of New Action Items:

Action Item: Provide Ecology with a copy of the ICAT Audit Report.
Actionee: L. E. Borneman
Due Date: The meeting after the report is issued.

Next Meeting: February 28, 2002, 9:30 am, 2704 HV.

222-S Project Managers Meeting & Misc. Lab Issues (TSD: TS-2-1)
1/31/02

Attachment 1
List of Attendees
Action Items
Other Handouts

222-S Project Managers Meeting & Misc. Lab Issues

2704HV/Room G-229
January 31, 2002
9:30 – 10:00 p.m.

Agenda

I. Introductions

II. Approval of Previous Meeting Minutes

III. Status of Action Items

IV. 222-S TSD Issues

- WAP

V. 222-S Laboratory

- Operational Report

VI. WSCF Laboratory

- Operational Report

VII. Misc. Issues

VIII. Review of New Action Items

222-S Project Managers Meeting & Misc. Lab Issues
January 31, 2002
9:30 – 10:00 a.m.

ATTENDEES

Name	Affiliation	MSIN	Phone
Lucinda Borneman	FH		373-2821
FRED JAMISON	ECOLOGY	B5-18	736-3022
JERRY DREWS	ECOLOGY	B5-18	736-3047
Tracy Crow	Ecology	B5-18	736-5718
JAY WARWICK	WSCF/ECO	S3-30	373-7076
Jennifer Nuzum	WSCF	S3-30	373-7185
Scot Fitzgerald	WSCF	S3-30	373-7495
Karen Ellis Burke	DOE-RL		372-3225

222-S Laboratory's Treatment Tanks and Storage Buildings (TSD: TS-2-1) and Miscellaneous Laboratory Topics

TRACKING NUMBER	DATE ASSIGNED	FACILITY	ACTION	ACTIONEE	DUE DATE [Target=T, Mandatory=M]	STATUS
AS-01-02	1/31/02	222-S	Provide ICAT Audit Report to Ecology.	L. Borneman	When Issued	OPEN

Impacts of Waste Management Prohibitions in the 219-S Tank System
WT02 for Rat Inhalation Only

January 31, 2002

Constituent	Not Allowed to the 219-S Tank	Allowed to the 219-S Tank	Result in 219-S Waste Acceptance	Reason
Sodium Carbonate	Between 1 – 10%	Above 10%	Concentrated solution can be transferred to tank system but dilute solution cannot.	Above 10% is Rat inhalation AND Rat Oral Toxic and can go to the tank
Sulfuric Acid	PH above 2 in buffered solution	PH below 2	Concentrated solution can be transferred to the tank system but dilute solution cannot. Concentrated Sulfuric Acid can be transferred to the tank system, but buffered solutions of pH 4 – 7 cannot.	PH below 2 is D002 Greater than 0.1% as long as solution is greater than pH 2 is WT02 for Rat Inhalation Only
Ammonia	1% to 10 %	Above pH 12.5	Concentrated solution can be transferred to the tank system but dilute solution cannot. Concentrated Ammonia solutions can be transferred to the tank system but AJAX cannot	PH above 12.5 is D002. 1 – 10% is WT02 for Rat Inhalation Only

Waste Analysis Plan for 222-S Laboratory Complex Waste Management Units

Proposed modification.
page 1-3, line 16
1/31/02

Date Published
August 2000

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

Fluor Hanford
P.O. Box 1000
Richland, Washington

Chris Willingham 8/28/00
Release Approval Date

CONTENTS

GLOSSARY

AA	atomic absorption
ALARA	as low as reasonably achievable
API	American Petroleum Institute
ASTM	American Society for Testing and Materials
CFR	Code of Federal Regulations
COLIWASA	composite liquid waste sampler
DEACT	deactivation as defined in 40 CFR 268.42
DOE	U.S. Department of Energy
DOE-RL	U.S. Department of Energy, Richland Operations Office
DOT	U.S. Department of Transportation
DST	double-shell tank
Ecology	State of Washington Department of Ecology
EPA	U.S. Environmental Protection Agency
GC/MS	gas chromatography/mass spectroscopy
GEA	gamma energy analysis
ICP	inductively coupled plasma
IPAN	imaging passive/active neutron
LDR	land disposal restriction
MSDS	material safety data sheet
PCB	polychlorinated biphenyls
QA	quality assurance
QC	quality control
RCRA	*Resource Conservation and Recovery Act of 1976*
RCW	Revised Code of Washington
TCLP	toxicity characteristic leaching procedure
TSD	treatment, storage, and/or disposal
UHC	underlying hazardous constituent
WAC	Washington Administrative Code

WASTE ANALYSIS PLAN FOR 222-S LABORATORY COMPLEX WASTE MANAGEMENT UNITS

1.0 UNIT DESCRIPTION

The purpose of this waste analysis plan (WAP) is to document the waste acceptance process, sampling methodologies, analytical techniques, and processes that are undertaken for sampling and analysis of dangerous and/or mixed waste managed in the 222-S Laboratory Complex treatment, storage, and/or disposal (TSD) unit. The 222-S Laboratory Complex is located in the 200 West Area of the Hanford Facility, Richland, Washington (Figures 1-1). Because dangerous waste does not include source, special nuclear, and by-product material components of mixed waste, radionuclides are not within the scope of this documentation. Information on radionuclides is provided only for general knowledge.

1.1 DESCRIPTION OF UNIT PROCESSES AND ACTIVITIES

The term 222-S Laboratory Complex describes both the geographical boundary established in the *Building Emergency Plan for the 222-S Laboratory Complex* (HNF-IP-0263-222S) and the waste management units contained in the 222-S Laboratory Complex TSD unit [Part A, Form 3 (DOE/RL-88-21)]. When referring to dangerous and/or mixed waste generated within the 222-S Laboratory Complex, the term "222-S Laboratory Complex" will be used. When referring to the waste management units contained in the TSD unit, the term "222-S Laboratory Complex TSD unit" will be used. The waste management units discussed in this WAP are:

- 219-S Waste Handling Facility, a tank system treatment and storage unit
- 222-S Dangerous and Mixed Waste Storage Area (222-S DMWSA), a container storage unit
- Room 2-B, a container storage unit.
- Room 4-E, a container storage unit.

Mixed waste is managed in each of the waste management units within the 222-S Laboratory Complex TSD unit. Dangerous waste is managed only in the 222-S DMWSA.

The 219-S Waste Handling Facility is located northeast of the 222-S Analytical Laboratory (Figure 1-2). The 219-S Waste Handling Facility accepts mixed waste for treatment and storage as well as radioactive waste for storage. Mixed and radioactive waste can be introduced into the 219-S Waste Handling Facility from: hood 16, hot cell drains within the 222-S Analytical Laboratory, piping connected from analytical instrumentation within the 222-S Analytical Laboratory, and various size containers pumped (e.g., tanker trucks, 208-liter drums) directly into one of the tanks. Mixed waste is aggregated in the tanks and prepared for transfer to another onsite TSD unit or offsite TSD facility. Acceptance criteria established in this WAP is designed to allow transfer of the mixed waste to the Double-Shell Tank (DST) System, an onsite TSD unit. The waste numbers appearing on the 222-S Laboratory Complex Part A, Form 3, for the 219-S Waste Handling Facility are based on the waste numbers contained on the Part A, Form 3, for the DST System.

After aggregation of mixed and/or radioactive waste in the tanks of the 219-S Waste Handling Facility, the batch of mixed waste proposed for transfer is isolated from other mixed waste in the tank system. For transfers into the DST System, a sample is acquired before and after treatment. Sampling and analysis results from the sample acquired before treatment will determine the amount of sodium hydroxide (NaOH) and sodium nitrite (NaNO2) that will be added to the isolated batch of mixed waste. Addition of

- Off-unit/offsite waste destined for the 219-S Waste Handling Facility.

Each of these general sources of waste is discussed in the following sections.

In addition, the following waste is prohibited from management in the 222-S Laboratory Complex container storage units (222-S DMWSA, Room 2-B, and Room 4-E):

- Dangerous and/or mixed waste not identified on the Part A, Form 3
- Reactive waste defined in WAC 173-303-090(7)(a)(vi), (vii), and (viii).

The following waste is prohibited from management in the 219-S Waste Handling Facility:

- Dangerous and/or mixed waste not identified on the Part A, Form 3
- Reactive waste defined in WAC 173-303-090(7)(a)(vi), (vii), and (viii)
- Organic compounds not miscible with water forming a separable layer
- Mixed waste designated as WT01 ~~or WT02~~ only for rat inhalation toxicity [WAC 173-303-640(5)(e)]
- Waste likely to precipitate to the extent drain lines will clog.

proposed revision 1/31/02

1.2.1 Waste generated within the 222-S Laboratory Complex

Waste generated within the 222-S Laboratory Complex includes analytical waste resulting from sample analysis, discarded chemical products from laboratory reagents/standards, waste from chemicals synthesized or created during research activities, unused samples, and maintenance/construction project waste. Other solid waste generated within the 222-S Laboratory Complex are outside the scope of this WAP.

1.2.1.1 Analytical Waste Resulting from Sample Analysis

Analytical waste resulting from sample analysis constitutes the largest volume of waste to be stored. Liquid and non-liquid waste forms, as well as aqueous and non-aqueous wastes, are generated from laboratory activities. Analytical waste resulting from sample analysis can include, but is not limited to, waste generated from performing work under the sample exclusion in WAC 173-303-071(3)(l), or the treatability study exclusions in WAC 173-303-071(3)(r), and (s).

Analytical waste resulting from sample analysis contains chemical reagents used in the laboratory procedures and a contribution from the sample. Waste designations performed on analytical waste will be based on the following three considerations:

- Reagents used in the laboratory procedure

- Parameters for which testing is being performed under the given laboratory procedure (e.g., metals for ICP waste)

- For sample contribution, listed waste numbers identified on documentation accompanying incoming samples to the 222-S Analytical Laboratory.

The preceding three bullets illustrate how analytical waste resulting from sample analysis is designated based on information documented prior to the generation of waste and information regarding the contribution of samples. Information documented prior to the generation of waste is evaluated by

1.2.1.5 Maintenance/Construction Project Waste

Maintenance/construction project waste is generated based on the need for such activities within the 222-S Laboratory Complex. Maintenance waste is typically generated from activities taking place on the 219-S Waste Handling Facility, the 222-S Analytical Laboratory ventilation system, and 222-S Analytical Laboratory hoods. Construction project waste can result from upgrades or renovations within the 222-S Laboratory Complex. Maintenance/construction project waste is primarily debris. Debris may be hazardous debris from maintenance of the 219-S Waste Handling Facility. Chemicals are evaluated when used in maintenance/construction project activities work planning process. Non-hazardous chemicals are substituted when ever possible. Hazardous chemicals are considered in the designation of debris. This approach establishes acceptable knowledge for maintenance/construction project waste.

1.2.2 Off-Unit/Offsite Waste

Off-unit/offsite waste managed within the 222-S Laboratory Complex TSD unit includes mixed waste destined for the 219-S Waste Handling Facility. Because of the ability to introduce waste into the 219-S Waste Handling Facility through Hood 16 in Room 2-B, hot cell drains, and the ability to configure the 219-S Waste Handling Facility to receive containerized waste, mixed waste is received and accepted at the 222-S Laboratory Complex that is destined for the 219-S Waste Handling Facility. Off-unit/offsite mixed waste introduced into Hood 16 or a hot cell drain will be accepted into the container storage unit(s) prior to introduction into the 219-S Waste Handling Facility. Acceptable knowledge is obtained during the confirmation process for off-unit/offsite mixed waste (Section 2.0).

1.3 OPERATING CONSTRAINTS

Operating constraints exist for the 222-S Laboratory Complex TSD unit and are related to the storage and/or treatment of the dangerous and/or mixed waste. Operating constraints related to the storage and/or treatment of dangerous and/or mixed waste are a subset of constraints required for operations at the 222-S Laboratory Complex TSD unit. The parameters identified in Section 3.0 of this WAP address operating constrains related to waste properties, processes, and regulatory requirements.

1.4 PROCESS FLOW DIAGRAM

Refer to the following figures to understand waste management processes within the 222-S Laboratory Complex.

- Figure 1-3: Sample Management
- Figure 1-4: Container Storage Units
- Figure 1-5: 219-S Waste Handling Facility - 222-S Laboratory Complex Generated Waste
- Figure 1-6: 219-S Waste Handling Facility - Off-unit/Offsite Waste.

222-S Project Managers Meeting & Misc. Lab Issues (TSD: TS-2-1)
1/31/02

Attachment 2
222-S Lab Operations Report
WSCF Operations Report

MONTHLY OPERATIONS STATUS
222-S LABORATORY
E. C. Vogt
January 2002

Environment/Safety & Health (ES&H)

Waste Generator Inspection

EPA and Ecology inspected the 222-S Laboratory Complex. The areas of interest were waste generator activities pertaining to Satellite Accumulation Areas and Waste Designations. They inspected 222-SA, Rooms 1 and 2, and the 222-S Laboratory rooms where organic/inorganic and ICP analyses are conducted. After the 222-S/SA laboratory inspection, there was a discussion pertaining to the dangerous waste designation process and how waste is designated at 222-S. Waste designations of analytical waste, as shown on Waste Stream Fact Sheets, and designation of the 219-S Tank waste were the subjects of most of the discussion. At the conclusion of the inspection, the inspectors stated that there were "no issues at this time," but that the inspection observation would be discussed with the lead inspector.

Waste Issues

Approval of University Exchange Program Waste for Transfer to the 219-S Tank System

A list of 240 small containers, containing University Exchange Program (UEP) radiologically contaminated waste chemicals, has been approved and issued, allowing the waste to be transferred to the 219-S Tank System. It is anticipated that transferring of these wastes will commence next week.

Air Permits

222-S Decontamination Trailer

A draft copy of the 222-S Decontamination Trailer Notice of Construction (NOC) was completed by FH Environment & Regulation and submitted for review and comment. The NOC is on schedule for a January 31, 2002 approval by FH and transmittal to RL and a May 3, 2002 approval by DOH.

Operations

Started 222-S and WSCF Facility Emergency Response Information Board assessment – they are not consistent with the information provided at each facility – A computer based training module will then be developed to inform personnel about the content of these "blue" boards in each of the buildings.

Developed a quarterly drill schedule for 222-S Laboratory

Procurement specification for the new 11-A filter housings has been completed and procurement of the housings is presently working its way through Passport. We can expect delivery of the housings 8 weeks after the vendor has received the request.

PUBLIC RELATIONS.

The 222-S Laboratory will commemorate **"222-S Lab – Celebrating 50 Years of Analytical Excellence,"** with kick-off festivities on January 31. Featured guest speakers will be John Wood (FH Vice President, Hanford Site Operations), Ed MacAlister (RL Analytical Service Facility Representative), Eric Vogt (222-S Facility Manager), and Bill Winters (222-S Chemist). Facility employees will receive red, white, and blue lanyards and special 50-year pins, which will both, display the anniversary slogan. Refreshments will be served and photos and memorabilia will be exhibited.

WSCF LABORATORY OPERATIONAL REPORT

MANAGER: J. L. Nuzum *January*

The new Dionex DX-600 ICs are at WSCF and the vendor has been performing installation and testing. These instruments will enable WSCF to reduce the amount of waste generated from this analysis. Additionally, an instrument used for ammonia analysis will be brought online with an operational target date of February 28. The second instrument is targeted to be online one month later.

The overall industrial hygiene analytical proficiency testing score for 2001 was 97%, with scores of 100% for solvents, 98% for metals, and 88% for fiber counting and free silica. The overall score for environmental lead proficiency testing for 2001 was 100%.

The Washington Department of Ecology, with assistance from the Environmental Protection Agency, inspected Hanford laboratories on January 15, 2002. This inspection revealed no violations.

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
L. E. Borneman, FH 373-2821	Distribution	FH-0201117 March 7, 2002

Subject: 222-S PROJECT MANAGERS' MEETING AND MISCELLANEOUS LAB ISSUES (TSD: TS-2-1), JANUARY 2002

DISTRIBUTION

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		L. E. Borneman	T6-14	X
		D. B. Hardy	T6-12	X
		J. L. Nuzum	S3-28	X
		E. C. Vogt	T6-14	X
		G. J. Warwick	S3-30	X
		222-S Regulatory File	T6-14	X
		WSCF Regulatory File	S3-30	X
		US. Department of Energy Richland Operations Office		
		J. Zeisloft	A2-15	X
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